

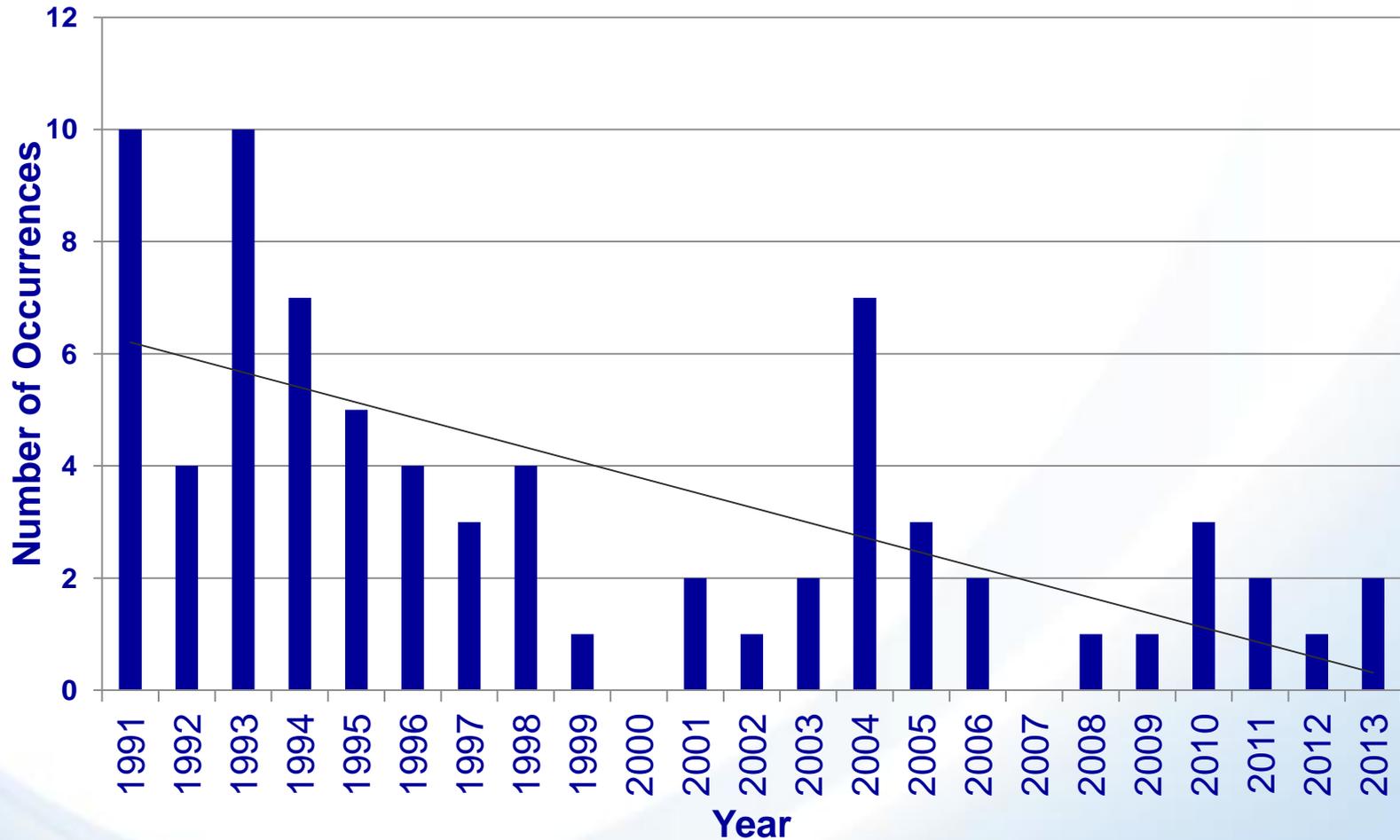
Take 5 for Safety

Maintaining Excellence
Picture of the Week

Collider-Accelerator Department
5-7-2013



Recent Uptick in DOE Reportable Events and USIs



Type of Event (ORPs, USI)

Collider-Accelerator Department, Date of Event: 4/17/2013

Description:

During Sr-82 processing in Building 801 Target Processing Laboratory, a hotplate overheated and released approximately 1 to 2 Ci of Sr-82 (25 day half-life) to air inside a shielded and ventilated enclosure. Approximately half of the Sr-82 was lost to a fenced filter bank area outside the building. No radioactivity released to the environment; it was all captured at the filter bank. The filter bank read ~1 R/h at 1 foot.

Cause(s):

Direct Cause: overheating the contents of a beaker.

Root Cause: management did not effectively implement configuration management for equipment and processes that had an impact on safety.

Near-Term Corrective Actions (Partial Listing):

Radiation detectors at filter bank and on ventilation piping
Calibrated hotplates; digital readout hot plates, and using a procedure to delineate operator actions for evaporations
Improved acid scrubber trunk hosing and enclosure over evaporation beaker; added steps to employ the scrubber
Estimated radioactivity yield in the targets using documented calculations prior to irradiation and processing

Long-Term Corrective Actions (Partial Listing):

Safety review of all changes to processing
Dry runs before new equipment is used
Controlled ventilation system drawings that indicate flow rate in each hot box
Evaluating the maximum radioactivity in-process and then adding shielding to the outdoor filter and acid scrubber unit



DuPont, Shell and Hitachi 'Beliefs' to Prevent Events

1 – Safety has overriding priority

- Priority must be visible in actions, particularly in manager's behavior
 - Do managers and supervisors review the implementation of procedures and practices in the workplace?

2 – All events can be prevented

- You cannot simply blame an event on worker negligence
 - Are procedures and equipment adequate for the job?

3 – Safety excellence has a positive impact on business

- Cost-benefit cannot be used to compromise safety
 - Do workers know the consequences can be significant (e.g., shutdown) or intangible benefits large (e.g., trusted supplier)?

4 – Safety must be a part of every job

- In manufacturing, this belief drove quality to new levels
 - Do workers believe they can achieve zero events?

5- Good safety is mainly in the head

- Safety is the way you think; not management systems
 - Do workers have a questioning attitude?

Bombs Away

- Ladders set up? Check.
- Scaffolding up? Check.
- Planked platforms? Check.
- Cinder blocks balanced two stories above the ground for no apparent reason? Why?

